

## CLAIMS

1. A method for synchronizing a multi-mode base station using one clock, when the systems to be synchronized are a GSM-type telecommunications system and a WCDMA-type telecommunications system, the method comprising:
  - 5 selecting the clock of the WCDMA-type system or a multiple thereof as the system clock of the multi-mode base station,
  - implementing the system clock of the GSM-type system using multiples of the frequency of the selected clock,
  - 10 synchronizing the frame structure of the GSM-type system at intervals of thirteen frames or a multiple of thirteen frames.
2. A method as claimed in claim 1, wherein the system clock of the WCDMA-type system is 3.84 MHz.
3. A method as claimed in claim 1, wherein the system clock of the
  - 15 GSM-type system is 13 MHz.
  4. A method as claimed in claim 1, wherein the WCDMA-type system is a UMTS system.
  5. A method as claimed in claim 1, wherein the GSM-type system is GSM.
  - 20 6. A method as claimed in claim 1, wherein the GSM-type system is GSM/EDGE.
  7. A method as claimed in claim 1, wherein the GSM-type system is GPRS.
  8. A method as claimed in claim 1, wherein the GSM-type system is
    - 25 EGPRS.
    9. A method as claimed in claim 1, wherein the GSM-type system is IS-136HS.
    10. An arrangement for synchronizing a multi-mode base station using one clock, when the systems to be synchronized are a GSM-type telecommunications system and a WCDMA-type telecommunications system, the arrangement comprising:
      - 30 means (624, 628) for implementing the system clock of the GSM-type system using multiples of the frequency of the WCDMA-type system clock,

means (624, 626, 628) for synchronizing the frame structure of the GSM-type system at intervals of thirteen frames or a multiple of thirteen frames.

11. An arrangement as claimed in claim 10, wherein the system  
5 clock of the WCDMA-type system is 3.84 MHz.

12. An arrangement as claimed in claim 10, wherein the system clock of the GSM-type system is 13 MHz.

13. An arrangement as claimed in claim 10, wherein the WCDMA-type system is a UMTS system.

10 14. An arrangement as claimed in claim 10, wherein the GSM-type system is GSM.

15. An arrangement as claimed in claim 10, wherein the GSM-type system is GSM/EDGE.

16. An arrangement as claimed in claim 10, wherein the GSM-type  
15 system is GPRS.

17. An arrangement as claimed in claim 10, wherein the GSM-type system is EGPRS.

18. An arrangement as claimed in claim 10, wherein the GSM-type system is IS-136HS.

20 19. A multi-mode base station using one clock, comprising:

means (624, 628) for implementing the system clock of the GSM-type system using multiples of the frequency of the WCDMA-type system clock,

25 means (624, 626, 628) for synchronizing the frame structure of the GSM-type system at intervals of thirteen frames or a multiple of thirteen frames. 20. A multi-mode base station using one clock, comprising:

implementing means (624, 628) implementing the system clock of the GSM-type system using multiples of the frequency of the WCDMA-type system clock,

30 synchronizing means (624, 626, 628) synchronizing the frame structure of the GSM-type system at intervals of thirteen frames or a multiple of thirteen frames.